

Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims 1-53 (canceled)

1 54. (New) A prosthesis assembly comprising:

2 a proximal prosthesis having a proximal end and a distal end, the
3 proximal prosthesis further having a proximal orifice at the proximal end to be
4 located in and when expanded to be supported by a vascular vessel;

5 at least one distal prosthesis;

6 the proximal prosthesis also having at least one distal orifice at the
7 distal end which when expanded serves to receive a proximal end of the at least one
8 distal prosthesis,

9 wherein the proximal prosthesis and the at least one distal prosthesis
10 each comprises an expandable stent and at least one fabric layer over and/or in the
11 expandable stent; and

12 wherein a cross-sectional area of the distal orifice when expanded is
13 sufficiently less than that of the proximal end of the at least one distal prosthesis
14 when expanded within the distal orifice so as to form a seal between the proximal
15 and distal prostheses.

1 55. (New) The prosthesis assembly according to claim 54, wherein the
2 distal end of the proximal prosthesis has a first intermediate portion which is
3 extended to form a distal portion, and a second intermediate portion which has a
4 distal orifice which has a relatively short inclined extension to enable the distal
5 prosthesis to be located therein when the short extension has been expanded, the
6 distal prosthesis having a proximal end which when expanded will form a seal with
7 the short extension.

1 56. (New) The prosthesis assembly according to claim 54, wherein the
2 distal end of the proximal prosthesis has first and second distal portions, the first
3 distal portion having the at least one distal orifice and the second distal portion

4 having another distal orifice for the receipt of the at least one distal prosthesis, each
5 of which will have a stent expandable to a cross-sectional area sufficiently greater
6 than the cross-sectional area(s) of the distal orifices so that effective seals are
7 formed.

1 57. (New) A prosthesis assembly comprising:

2 a) a proximal prosthesis having a distal end, the proximal prosthesis
3 being expandable and having a proximal orifice;

4 b) first and second distal prostheses;

5 c) the proximal prosthesis also having a distal orifice at the distal end
6 that when expanded receives at least one proximal end of the first and second distal
7 prostheses;

8 d) wherein each of the proximal and distal prostheses comprises an
9 expandable stent and at least one fabric layer over and/or in the stent; and

10 e) wherein a cross-sectional area of the distal orifice of the proximal
11 prosthesis when expanded is sufficiently less than the sum of cross-sectional areas of
12 the proximal ends of the distal prostheses when expanded within the distal orifice, so
13 as to form a seal with the distal orifice when the distal prostheses are expanded
14 therein.

1 58. (New) The prosthesis assembly of claim 57, wherein the proximal
2 prosthesis further comprises an expandable stent.

1 59. (New) The prosthesis assembly of claim 58, wherein each of the
2 distal prostheses further comprises an expandable stent.

1 60. (New) A prosthesis assembly comprising:

2 a proximal prosthesis, a pair of distal prostheses, the proximal
3 prosthesis being expandable and having a distal end and a proximal orifice, the
4 proximal prosthesis also having a distal orifice at the distal end which when
5 expanded serves to receive proximal ends of the pair of distal prostheses, wherein
6 each of the proximal and distal prostheses comprises an expandable stent and at
7 least one fabric layer over and/or in the stent, and wherein the cross-sectional area
8 of the distal orifice of the proximal prosthesis when expanded is sufficiently less than
9 the sum of the cross-sectional areas of the proximal ends of the distal prostheses
10 when expanded within the distal orifice so as to form a seal with the distal orifice
11 when the pair of distal prostheses are expanded therein.

1 61. (New) The prosthesis assembly as claimed in claim 54, wherein a
2 portion of at least one of said proximal prosthesis and said distal prosthesis has a
3 different radiopacity, said portion of different radiopacity facilitating proper alignment
4 of said proximal and distal prostheses.

1 62. (New) The prosthesis assembly as claimed in claim 54, further
2 comprising:

3 radiographic indicia defined on at least one of said proximal prosthesis
4 and said distal prosthesis and having different radiopacity from said prosthesis,
5 wherein the composite radiographic image of said radiographic indicia varies with the
6 rotational orientation of said prosthesis;

7 wherein the rotational orientation of said prosthesis in the body lumen
8 is indicated by said radiographic image for optional adjustment of the rotational
9 orientation.

1 63. (New) A system for introducing the prosthesis assembly of claim
2 54, into a vessel to define a continuous lumen, said system comprising:

3 a first introducer for introducing the proximal prosthesis into the
4 vessel, said proximal prosthesis having a portion adapted for connection to the distal
5 prosthesis; and

6 a second introducer for (a) introducing the distal prosthesis of said
7 prosthesis assembly in a radially compressed state into the vessel and into said
8 portion of said proximal prosthesis, and (b) deploying said distal prosthesis to
9 connect to said portion of said proximal prosthesis and to define said continuous
10 lumen through said proximal prosthesis and said distal prosthesis.

1 64. (New) The prosthesis assembly as claimed in claim 54, said
2 prosthesis assembly being configured for placement at an anatomical bifurcation of
3 a vessel into two branched vessels, said proximal prosthesis defining two lumens, at
4 least one of which is configured to be disposed entirely within said vessel and is
5 adapted to mate with said distal prosthesis configured to extend into one of the two
6 branched vessels.

1 65. (New) The prosthesis assembly as claimed in claim 54, said
2 prosthesis assembly comprising a male engaging portion on a selected one of said
3 proximal prosthesis and said distal prosthesis, and a female portion on another one
4 of said proximal prosthesis and said distal prosthesis, said male engaging portion
5 being configured to be positioned at least partially within said female portion for
6 inter-engagement between the outer surface of said male engaging portion and the
7 inner surface of said female portion to resist longitudinal movement to prevent
8 separation of said male engaging portion from said female portion, each of said male
9 engaging portion and said female portion comprising a stent and at least one of said
10 proximal prosthesis and said distal prosthesis comprising a fabric layer attached to
11 said stent, said fabric layer being configured to be interposed between said male
12 engaging portion and said female portion to form a substantially fluid-tight seal upon
13 assembly.